Title (en)

Transducer for temporal variation of temperature, electronic chip including transducteur and method for manufacturing chip

Title (de)

WANDLER FÜR ZEITLICHE TEMPERATURVARIATION, ELEKTRONISCHER CHIP EINSCHLISSLICH DES WANDLERS UND ZUGEHÖRIGES VERFAHREN ZUR HERSTELLUNG

Title (fr)

Transducteur de variation temporelle de température,puce électronique incorporant ce transducteur et procédé de fabrication de cette puce

Publication

EP 2385486 A1 20111109 (FR)

Application

EP 11165201 A 20110506

Priority

FR 1053554 A 20100506

Abstract (en)

The transducer has an upper conductive electrode (40) exposed to temporal variation of temperature to be measured. A pyroelectric material layer (44) is directly interposed between the upper conductive electrode and a lower conductive electrode (42) to generate potential difference between the electrodes corresponding to the temperature variation even in the absence of exterior mechanical constraints, where pyroelectric material is based on 111-V nitride or aluminum nitride. The upper conductive electrode is made of molybdenum or titanium. Independent claims are also included for the following: (1) a thermal pattern detecting electronic chip comprising a resistor in the form of a resistive strip (2) a method for manufacturing a thermal pattern detecting electronic chip.

Abstract (fr)

Ce transducteur de variation temporelle de température en une différence de potentiels comporte : - une électrode conductrice supérieure (40) destinée à être exposée à la variation temporelle de température à mesurer, - une électrode conductrice inférieure (42), - au moins une couche (44) en matériau pyroélectrique directement interposée entre ces électrodes pour générer entre ces électrodes la différence de potentiels correspondant à la variation de température, même en absence de contrainte mécanique, le matériau pyroélectrique étant à base de nitrure III-V.

IPC 8 full level

G06K 9/00 (2006.01); **G01J 5/34** (2006.01)

CPC (source: EP US)

G01J 5/024 (2013.01 - EP US); **G01J 5/046** (2013.01 - EP US); **G01J 5/10** (2013.01 - EP US); **G01J 5/34** (2013.01 - EP US); **G01J 5/80** (2022.01 - EP); **G01K 3/10** (2013.01 - EP US); **G01K 7/003** (2013.01 - EP US); **G06V 40/1306** (2022.01 - EP US); **G06V 40/1329** (2022.01 - EP US); G01J 5/80 (2022.01 - US)

Citation (applicant)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 11165201 A 20110506; FR 1053554 A 20100506; JP 2011103397 A 20110506; US 201113101478 A 20110505